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11. (Twice Amended) A method for making a plastic pallet [wherein said method comprises] comprising:

molding a composition comprising polyphenylene ether resin and blends containing polyphenylene ether resin, at least one flame retardant, at least one impact modifier, and [two] one or more other resins selected from the group consisting of:

[(a) polyphenylene ether resin and blends containing polyphenylene ether resin,]

[(b)] polycarbonate resin and blends containing polycarbonate resin,

[(c)] vinyl aromatic graft copolymer resin,

[(d)] polyetherimide resin and blends containing polyetherimide resin, and

[(e)] thermosetting resins; and

wherein the pallet [said resins and impact modifier(s) are combined in a manner effective in meeting or exceeding] meets or exceeds Underwriters Laboratory UL 2335 protocol for pallets.

REMARKS

Claims 1-16 are pending in the present application. The Examiner has rejected Claims 1-16, although no specific rejection of Claim 5 has been indicated. Claims 10 and 16 has been canceled and Claims 1-3, 5-8 and 11-15 have been amended, leaving Claims 1-9 and 11-15 for consideration upon entering the present amendment. The amendments herein presented are made for the purposes of better defining the invention. Support for these amendments can be found in the specification and claims as originally filed. Specifically, support for the amendments to the claims can be found in the examples found on page 32, line 18 to page 33, line 19, for example. No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the amendments and the following remarks.

The Examiner has rejected Claims 6-8 and 13-15 under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The above amendments to the claims address this rejection by more distinctly claiming the present invention. Reconsideration and withdrawal of the rejection is requested.

Claims 1, 6, 8, 9 and 15 stand rejected under 35 U.S.C. §102(b) as allegedly being met by Alexander et al. (U.S. Patent No. 5,492,069) and rejected in the alternative as allegedly being obvious over Alexander et al. under 35 U.S.C. §103(a). Applicants respectfully disagree. The Examiner states the “[r]eference teaches the use of mixtures of polymers of the instant claims’ genus in making plastic pallets. Burden is on applicant to substantiate that reference’s pallets do not meet UL 2335 test standard.” (Paper No. 9, page 2)

The Alexander et al. patent discloses a modular shipping pallet assembly molded from recyclable or recycled thermoplastic polymers. (See Abstract) Alexander et al. teach the use of non-crystalline polymers such as polyolefins, polyesters, e.g. poly(ethylene terephthalate), poly(vinyl chloride), ethylene-carbon monoxide copolymers, poly(ether) ketones and nylon, and crystalline polymers such as polystyrene, acrylics and polycarbonates. Preferred polymers for use in making the pallets are polyolefins such as polyethylene, polypropylene, and ethylene-propylene copolymers. High density polyethylene and polypropylene are particularly preferred. (Col. 7, lines 15-27) Alexander et al. teach that thermoset polymers and highly cross-linked polymers are not preferred for use in their invention because they are insufficiently thermoplastic to be injection molded. (Col. 7, lines 11-14)

The present invention claims a method for making a plastic pallet and a plastic pallet that is comprised of polyphenylene ether resin and blends containing polyphenylene ether resin, one or more other resins, at least one flame retardant, and at least one impact modifier. The other resins are selected from the group consisting of polycarbonate resin and blends containing polycarbonate resin, vinyl aromatic graft copolymer resin, polyetherimide resin and blends containing polyetherimide resin, and thermosetting resins. As is claimed, this pallet meets or exceeds the Underwriters Laboratory UL 2335 protocol for pallets. (Claim 1) The present invention also

teaches that commercial pallets made from polyethylene resin fail to meet the Underwriters Laboratory UL 2335 testing protocol. (Page 35, lines 8-9)

To anticipate a claim under 35 U.S.C. §102, a single source must contain all of the elements of the claim. *Lewmar Marine Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1007 (1988). Moreover, the single source must disclose all of the claimed elements "arranged as in the claim." *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984).

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Establishing a *prima facie* case of obviousness requires that all elements of the invention be disclosed in the prior art. *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). The requirement for a determination of obviousness is that "both the suggestion and the expectation of success must be founded in the prior art, not in applicant's disclosure" (emphasis added). *In re Dow Chem.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988).

Contrary to the present invention, the Alexander et al. patent does not teach or suggest the use of polyphenylene ether resin or a flame retardant. Actually, Alexander et al. teach away from the present invention by disclosing polyethylene as the preferred polymer (Col. 7, lines 23-27), while the present invention teaches that commercial pallets made from polyethylene resin fail to meet the UL testing protocol. (Page 35, lines 8-9) The Alexander et al. patent does not teach or suggest all of the elements of the present invention, as outlined above. As a result, Alexander et al. fail to anticipate or render obvious the present invention. Therefore, Applicants request that the Examiner reconsider and withdraw the rejections of Claims 1, 6, 8, 9 and 15 under 35 U.S.C. §102 and 35 U.S.C. §103.

Claims 1, 6, 9, 10, and 11 stand rejected under 35 U.S.C. §102(b) as allegedly anticipated by Alexander et al. or, in the alternative, under 35 U.S.C. §103(a) as allegedly being obvious over Alexander et al. taken with Fuhr (U.S. Patent No. 5,157,065). Applicants respectfully disagree. The Examiner states the rejection is based on the obviousness of adding a flame retardant to the pallet-producing plastic

formation. The Examiner contends that adding that the UL 2335 test standard requirements are met by the composition does not render the composition's use for this purpose unobvious because the Applicants have not established that this standard would not have been met by Alexander et al.'s teachings even in the absence of a flame retardant. (Paper No. 9, pages 2-3) Applicants would like to first direct the Examiner to Page 35, lines 8-9 where Applicants' specification teaches that pallets of polyethylene resin (Alexander et al.'s preferred resin) fail to meet the UL protocol. Consequently, the Applicants have established that the standard would not be met by Alexander et al.

The Examiner contends that Alexander et al. combined with the flame retardant of Fuhr discloses the present invention. As previously discussed, the Alexander et al. patent do not anticipate nor render the present invention obvious because Alexander et al. do not teach or suggest the use of polyphenylene ether resin or a flame retardant. The Examiner contends in the first Office Action (Paper No. 6, page 3) that Alexander et al. suggest "that pallets should not be flammable[,] it would be obvious to utilize as the composition one which is comprised of polycarbonates made less flammable by phosphates and styrenic resins inclusion. Such a composition would be readily selected from those which Fuhr had previously disclosed." In the "Background Of The Invention" section of Alexander et al., there is discussion regarding problems associated with wooden pallets including substantial safety and sanitation problems, such as flammability, sharp edges, splinters, protruding nails, as well as health problems from infestation from insects, birds, and rodents. (Col. 1, lines 29-44) Alexander et al. go on to state that plastic pallets have been considered as possible solutions to this problem but the plastics are less economical than wood. Alexander et al.'s pallet is not wooden and Alexander et al. do not mention whether flammability is a problem associated with their pallet. Consequently, in supporting the contention of obviousness, the Examiner cites this section out of context, i.e., to improperly support controlling flammability.

The Fuhr patent discloses a flame resistant polycarbonate thermoplastic moulding composition and the process for the preparation of the molding composition. (See Abstract) Fuhr teaches the use of thermoplastic aromatic

polycarbonate, a graft polymer, a phosphorous compound, and an anti-dripping agent. (Col. 1., line 6 to Col. 3, line 3) Fuhr teaches that the thermoplastic moulding composition may also contain other thermoplasts such as polysulphones, polyether sulphones, polyketones, polyether ketones, polyphenylene ethers, polyarylene sulphides and additives. (Col. 9, lines 50-57) Although Fuhr teaches that polyphenylene ether may be utilized in the thermoplastic moulding composition, Fuhr does not teach or suggest the use of this composition in pallets.

As stated above, for an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, requiring that all elements of the invention be disclosed in the prior art. Neither Alexander et al. nor Fuhr teach, suggest, or motivate an individual to modify or combine the Alexander et al. patent with the Fuhr patent. Alexander et al. is directed to pallets, preferably comprising polyethylene, while Fuhr is directed to a polycarbonate composition. There is no teaching or suggestion, i.e., no motivation, to combine these references, absent improperly relying upon the teaching of the present invention. The Examiner has not met the burden of establishing a *prima facie* case of obviousness. Therefore, Applicants request that the Examiner reconsider and withdraw the rejections of Claims 1, 6, 9, 10, and 11 under 35 U.S.C. §102 and 35 U.S.C. §103.

Claims 1, 6, 9, 10 and 11 stand rejected under 35 U.S.C. §102(b) as allegedly anticipated by any of Fowler (U.S. Patent No. 3,814,031) (herein after '031), Fowler (U.S. Patent No. 3,951,078) (herein after '078) and Fowler (U.S. Patent No. 4,007,694) (herein after '694) or, in the alternative, under 35 U.S.C. §103(a) as allegedly being obvious over the Fowler patents '031, '078, and '694. Applicant respectfully disagrees.

The Examiner contends that any plastic within Fowler's teachings is capable of forming pallets, and that evidence of the UL 2335 test standards requirement having been met by the instant formulation fails to distinguish them from Fowler's similarly comprised pallets' compositions. (Paper No. 9, page 3)

The Fowler patents '031, '078, and '694 disclose the same description of the materials used in the manufacture of the plastic pallets. ('031 at Col. 6, lines 7-20; '078 at Col. 4, lines 45-58; '694 at Col. 3, lines 18-33) For ease in understanding,

when Fowler, or the Fowler patents, are referenced hereafter, it is encompassing the information presented in the disclosures of Fowler patents '031, '078, and '694, but is specifically citing to information from '031.

Fowler discloses that both thermosetting and thermoplastics can be used as the material for making pallets. Examples of suitable polymers include phenolic resins such as phenolformaldehyde, epoxies, melamineformaldehyde polyesters, polyethylene, polypropylene, nylon, acrylic resins, polystyrene, polyvinyl chloride and a number of other common and specialty plastics including copolymers and terpolymers, such as ABS, with polyethylene preferred. (Col. 6, lines 10-16; 35-42) Contrary to the present invention, Fowler does not teach or suggest the use of polyphenylene ether resin or a flame retardant and prefers a material which fails to meet the UL testing protocol.

As stated above, to anticipate a claim under 35 U.S.C. §102, a single source must contain all of the elements of the claim, while establishing a *prima facie* case of obviousness, requires that all elements of the invention be disclosed in the prior art. Fowler does not teach all of the elements of the present invention, specifically Fowler does not teach or suggest the use of polyphenylene ether resin or a flame retardant. Since Fowler does not teach all the elements, e.g. it lacks polyphenylene ether resin and a flame retardant, Fowler fails to anticipate or render obvious the present invention. Therefore, Applicants request that the Examiner reconsider and withdraw the rejections of Claims 1, 6, 9, 10 and 11 under 35 U.S.C. §102 and 35 U.S.C. §103.

Claims 1, 8, 9, 11 and 15 stand rejected under 35 U.S.C. §103 as being allegedly unpatentable over Alexander et al. in view of the Fowler patents. The Examiner contends that thermosetting resins, while not preferred by Alexander, would be obvious resins in plastic pallets' production. Applicant respectfully disagrees that these references, alone or in combination render the present invention obvious.

As previously discussed, neither Alexander et al. nor the Fowler patents anticipate nor render the present invention obvious because they do not teach or suggest the use of polyphenylene ether resin or a flame retardant as is taught and claimed in the present application. Consequently, the combination of the Fowler patents with Alexander et al. do not anticipate or render obvious the present invention.

For example, even combined, these references fail to teach or suggest that pallets comprising polyphenylene ether resin and a flame retardant, as is claimed in the present invention. Applicants respectfully submit that the Examiner has failed to make out a *prima facie* case of obviousness. Applicants request that the Examiner reconsider and withdraw the rejections of Claims 1, 8, 9, 11 and 15 under 35 U.S.C. §103.

Claims 1-4, 9-12 and 16 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Alexander et al., Haaf (U.S. Patent No. 3,639,506) and the Fowler patents. The Examiner contends that Haaf utilizes polyphenylene ether resins in formulating PPO/Polystyrene blends for pallet producing formulations. Applicant respectfully disagrees. Contrary to the Examiner's contention, Haaf fails to teach the use of the claimed composition in pallets.

As previously discussed, neither Alexander et al. nor the Fowler patents anticipate nor render the present invention obvious because they do not teach or suggest the use of polyphenylene ether resin or a flame retardant, as is claimed in the present invention. However, the Examiner contends that Alexander et al. and the Fowler patents combined with Haaf discloses the present invention.

Haaf teaches a flame retardant composition comprising the addition of a flame retardant, comprised of an aromatic phosphate and an aromatic halogen compound, to a composition of polyphenylene ether and a styrene resin. (See Abstract) The addition of the aromatic phosphate and an aromatic halogen compounds improves the flame retardant properties of the blend to a point where it satisfies the requirements set forth by the ASTM test method D 635 and Underwriters' Laboratory Bulletin No. 94. (See Abstract; Col. 2, line 71 to Col. 3, line 6)

As stated above, for an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, requiring that all elements of the invention be disclosed in the prior art. Further, even assuming that all elements of an invention are disclosed in the prior art, an Examiner cannot establish obviousness by locating references that describe various aspects of a patent applicant's invention without also providing evidence of the motivating force which would have impelled one skilled in the art to do what the patent applicant has done.

Ex parte Levengood, 28 U.S.P.Q. 1300 (Bd. Pat. App. Int. 1993). The references, when viewed by themselves and not in retrospect, must suggest the invention. *In Re Skoll*, 187 U.S.P.Q. 481 (C.C.P.A. 1975).

Neither Alexander et al., the Fowler patents, nor Haaf teach all of the elements of the present invention, and do not teach or suggest modification or combination of the Alexander et al. and/or the Fowler patents with Haaf to obtain the present invention. Although Haaf teaches the use of polyphenylene ether and flame retardants, considering that neither Alexander et al. nor Fowler suggest polyphenylene ether or flame retardants, an individual would not be motivated by either Alexander et al. or the Fowler patents to look to Haaf, absent an improper reliance upon the teaching of the present invention. Applicants respectfully submit that the Examiner has failed to make out a *prima facie* case of obviousness. Therefore, Applicants request that the Examiner reconsider and withdraw the rejections of Claims 1-4, 9-12 and 16 under 35 U.S.C. §103.

Claims 1, 7-11, 14, 15 and 16 stand rejected under 35 U.S.C. §103 as allegedly being unpatentable over Alexander et al. or the Fowler patents taken with Weinrotter et al. (U.S. Patent No. 5,271,889) and Serafina (U.S. Patent No. 5,461,138). Applicant respectfully disagrees. The Examiner contends that it would be obvious to make the combination because of the expected suitability of polyimides as pallet-producing plastics, since they have proven machinability and load bearing properties. (Paper No. 9, page 4) Although the Examiner's contention seems purely speculative, the point still remains that, even combined, these references fail to teach a pallet comprising polyphenylene ether resin and a flame retardant, as is taught and claimed in the present application.

As previously discussed, neither Alexander et al. nor the Fowler patents anticipate nor render the present invention obvious because they do not teach or suggest the use of polyphenylene ether resin or a flame retardant, as is claimed in the present invention. However, the Examiner contends that Alexander et al. or the Fowler patents combined with Weinrotter et al. and Serafina discloses the present invention.

Weinrotter et al. teaches flame retardant, high temperature resistant polyimide

fibers, nonwovens made from said fibers, as well as the fibers and molded articles obtained after heat treatment. (See Abstract) The object of Weinrotter et al. is make polyimide fibers that are useful in the manufacture of molded articles, having a high tensile strength, a high temperature resistance, and flame-retardant properties. (Col. 2, lines 31-36) Weinrotter et al. disclose that the molded articles manufactured according to their invention are machinable with conventional machines known in the wood and plastic industries. (Col. 7, lines 30-33)

Serafina teaches a method of forming a homogeneous, concentrated, pre-polymer composition useful for forming polyimide composites. (See Abstract) Serafina discloses that polyimide resins are used to form structural components because polyimides are lightweight and have superior load-bearing characteristics. (Col. 1, pages 28-34)

As stated above, for an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, requiring that all elements of the invention be disclosed in the prior art. Neither Weinrotter et al. nor Serafina teach all of the elements of the present invention and even if combined with Alexander et al. or Fowler (contrary the lack of motivation for such combination), they fail to remedy the deficiencies of Alexander et al. or Fowler. These references fail to teach the use of polyphenylene ether resin or a flame retardant for manufacturing a pallet, as is claimed in the present invention.

Applicants respectfully submit that the Examiner has failed to make out a *prima facie* case of obviousness. Therefore, Applicants request that the Examiner reconsider and withdraw the rejections of Claims 1, 7-11, 14, 15 and 16 under 35 U.S.C. §103.

It is believed that the foregoing remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and withdrawal of the objection and the rejections and allowance of the case are requested.



If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 07-0862 maintained by the Applicants' Attorneys.

Respectfully submitted,

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